CHAPTER 4

CRYPTOSECURITY

Upon completing this chapter, you should be able to do the following:

- Identify the procedures, methods, and steps for the destruction of Secret and below material.
- Identify the procedures used for the verification of destruction records of Secret and below material.
- Identify the procedures for receipt, inspection, inventory, control, destruction, and verification of destruction of SPECAT or Top Secret and above material.
- Identify the procedures for receipt, inspection, inventory, control, destruction, and verification of destruction of COMSEC material.
- Identify the procedures used when submitting required CMS reports to the CMS custodian.

In this chapter we will address both general classified material and COMSEC material that deals with cryptosecurity in broad terms. The COMSEC portion is written from the perspective of the local holder's, local holder alternate's, and user's responsibilities.

As a Radioman, you will be required to handle many different types of material. You must know the correct procedures for receiving, inventorying, destroying, and providing all required documentation for this material.

General classified material usually is considered classified messages, publications, and instructions. COMSEC material is material used to protect U.S. Government transmission, communications, and the processing of classified and sensitive unclassified information. This is related to national security protection from unauthorized persons and material allowing for the authenticity of all such communications.

The protection of vital and sensitive information moving over government communications systems is crucial to the effective conduct of the government and specifically to the planning and execution of military operations. For amplifying information on the handling of classified material, consult *Information and* Personnel Security Program Regulations (OPNAVINST 5510. 1). For COMSEC material, refer to Communications Security Material System (CMS) Policy and Procedures Manual, CMS 1.

SECRET AND BELOW MATERIAL DESTRUCTION

Classified material that is no longer required should not be allowed to accumulate. Superseded and obsolete classified materials that have served their purpose should be destroyed in accordance with CMS 1 and local requirements.

The following information is presented not with the intent to give complete instructions or requirements; but rather as an overview of basic methods.

METHODS OF DESTRUCTION

Routine destruction of Secret and below material may be accomplished by burning, pulping, pulverizing, or shredding. Every command has a locally produced destruction SOP; this SOP will detail the specific requirements for your duty station.

DESTRUCTION

Secret material will be destroyed following the twoperson rule without a record of destruction. If only one person destroys Secret material, a record of destruction must be made.

When destroying Confidential material, personnel must have a clearance level equal to or greater than the material. No record of destruction is required.

The commanding officer may impose additional controls at his or her discretion.

COMPLETE DESTRUCTION REPORTS

Destruction reports will be made in accordance with OPNAVINST 5510.1 and local instructions.

VERIFY DESTRUCTION RECORDS

To verify destruction records, the senior person will ensure that the material has been completely destroyed and only residue remains. All blanks are filled in correctly on the destruction report (if one is required), and it is turned into the proper authority.

SPECAT OR TOP SECRET AND ABOVE MATERIALS

Classified material that is of a more sensitive nature requires more "eyes-on" and "paper-trail" procedures. These materials must be provided control and accounting that relates to their assigned classification. This will limit the dissemination, reproduction, and viewing by personnel who, in the course of their duties, require access.

RECEIVE

SPECAT or Top Secret will normally be handled at the E-6 and above level. If receipt of this material is a recurring event at the command, follow the guidelines in OPNAVINST 5510.1, and local instructions.

INSPECT

Upon receipt of SPECAT, TOP Secret, or above material, ensure that all receipts and material are identified and verified prior to acceptance of the material.

INVENTORY

Material will be logged in the Top Secret log and placed in the appropriate safe.

CONTROL

Access to SPECAT, Top Secret, or above material will be closely guarded on a need-to-know basis. All material must be accounted for by signature.

DESTROY

Top Secret material will be destroyed by two witnessing officials. Those performing the destruction must have a clearance level equal to or greater than the material being destroyed.

Destruction of SPECAT and Top Secret and above material was covered in depth in module 1.

VERIFY DESTRUCTION

For information and procedures relating to verifying the destruction of SPECAT and Top Secretor above material, refer to OPNAVINST 5510.1 and local instructions.

COMSEC MATERLAL

Communications security (COMSEC) is a framework that allows the NAVY a unique distribution system that takes into account strict accountability and control procedures. The requirements for this system are exacting to ensure proper use of the cryptosystems in all areas.

RECEIVE

To receive material into local custody is to accept the responsibility for the proper handling, safeguarding, accounting, and disposition of COMSEC material issued by the custodian and user personnel. Every person who receives COMSEC material must complete a CMS Responsibility Acknowledgement Form, which is located in Annex K of CMS 1. This signed form must be on file with the CMS Custodian.

INSPECT

Local holders (LHs) will inspect the material that is issued for their use. They should verify that all material listed on the SF-153 is physically accounted for, check that all short titles and accounting numbers match, and

have any questions for use or storage answered prior to acceptance of the material.

INVENTORY

LH custodians must main a local custody file containing effective signed local custody documents. These will list all material in their possession. A watch station must maintain a watch-to-watch inventory that lists all COMSEC material held. This material is to be listed by short title, edition, accounting numbers, and quantity.

CONTROL

Watch-to-watch inventory is used to maintain control of effective material and material to be used in the future. Effective and supersession dates for all COMSEC material (less equipment and related components and devices) that the watch holds must have clearly marked dates in accordance with Article 760 of CMS 1.

DESTROY

Destruction of superseded material must be accurately documented and conducted within the required time frame. Article 790 of CMS 1 contains destruction procedures, and chapter 5 delineates personnel, methods, and time periods for destroying COMSEC material.

VERIFY DESTRUCTION

Refer to CMS 1 and local instructions for procedures to verify destruction of all COMSEC materials.

REQUIRED CMS REPORTS SUBMITTED TO CMS CUSTODIAN

CMS reports to the CMS Custodian normally include destruction reports and SF-153's that contain material that is to be returned to the CMS Custodian.

Further information on reports that the CMS Custodian may require are found in detail in CMS 1 and its various annexes.

SUMMARY

Security precautions will protect the integrity of the systems that are in place as long as you, as the radioman, understand and carry out the correct methods for handling, inventorying and destruction of required classified or COMSEC material. Security considerations presented in this chapter will not guarantee protection, nor do that try to cover all required areas. You will have to research and familiarize yourself with all requirements at the command or area that you are working in.

APPENDIX I

GLOSSARY

A

AUTHENTICATION— A security measure designed to protect a communications or command system against fraudulent transmissions or simulation.

AUTOMATIC DIGITAL NETWORK (AUTODIN)— A worldwide automatic communications system that provides automatic data service.

В

BEADWINDOW— A term describing a real-time procedure used to alert circuit operators that an unauthorized disclosure has occurred.

 \mathbf{C}

- **CARRIER** the unmodulated signal originally produced in the oscillator section of a transmitter.
- **CONFIDENTIAL** Information the unauthorized disclosure of which could reasonably be expected to cause damage to the national security.
- **CRYPTOSYSTEM** Information encompassing all the associated items of cryptomaterial that are used together to provide a single means of encryption or decryption.

D

- **DEFENSE SWITCHED NETWORK (DSN)** A nonsecure telecommunications telephone interconnected network among military and other government installations (formerly AUTOVON).
- **DIRECTED NET** A net in which member stations must obtain permission from the net control station (NECOS) prior to communicating with other stations on the net.

 \mathbf{E}

EMISSION CONTROL (**EMCON**)— General or specific restrictions placed on electromagnetic radiations for a particular area or areas.

F

FREE NET— A communications net of which member stations need not obtain permission of the net control station (NECOS) to transmit.

G

GATEGUARD— A security subsystem that allows commands to interface directly with the AUTODIN system as part of the NSTA program.

L

LOCAL HOLDER— A command or activity whose COMSEC material needs are met by drawing the material from a single CMS account.

M

MANUAL RELAY CENTER MODERNIZATION PROGRAM (MARCEMP)— An automation support system for all aspects of HF message relay operation in the Fleet Center.

P

PROSIGNS— Letters, or combinations of letters, that convey frequently sent orders or instructions in a simple, standard format.

PROWORDS— The phonetic equivalent of prosigns.

S

- **SECRET** Information the unauthorized disclosure of which could reasonably be expected to cause serious damage to the national security.
- SECURE TELEPHONE UNIT THIRD GENERATION (STU-III)— Desktop phone unit that provides users with both clear and secure voice and data transmissions.
- **SEED KEY** Special keying material used for the initial electronic set-up of the STU-III terminal.
- **SERVICE MESSAGE** A short, concise message between communication personnel requiring prompt attention.

APPENDIX II

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

 \mathbf{E} A **EDPE**— Electronic data processing equipments AGT— AUTODIN Gateway Terminal **EEFI**— Essential Elements of Friendly Information **AIG**— Address indicating groups **EMCON**— Emission control AIS— Automated Information System **EOM**— End of message AIT— AUTODIN Interface Terminal **EWC**— Electronic warfare coordinator **ASC**— AUTODIN Switching Center **AST**— AUTODIN Subscriber Terminal \mathbf{F} **AUTODIN**— Automatic Digital Network FIFO— First-in-first-out **AUTOVON**— Automatic Voice Network FLTSATCOM— Fleet Satellite Communications В G **GD**— Guard device BIU-BUS interface unit GMT— Greenwich mean time \mathbf{C} C2— Command and control HARPS— Hybrid AUTODIN Red Patch Service **CAI**— Communication Action Identifier **HERO**— Hazards of Electromagnetic Radiation to **CDPS**— Communication Data Processing System Ordnance CIC—Combat Information Center; Content Indicator I Code I/O— Input and output **CIK**— Crypto-ignition key K CIN— Component identification number KMC— Key Management Center **CMS**— Communications Security Material System **COMSEC**— Communications security L COMNAVCOMTELCOM— Commander, Naval **LDMX**— Local Digital Message Exchange Computer and Telecommunications Command LH— Local Holder **CUDIXS**— Common User Digital Information Exchange System \mathbf{M} CSN— Channel service number MAN— Message accountability number D MARCEMP— Manual Relay Center Modernization Program **DCS**— Defense Communications System

DSN— Defense Switched Network

MLPP— Multilevel precedence and preemption

| MSL— Master Station Log | R |
|--|---|
| MS/DOS— Microsoft® Disk Operating System | RAM— Random-access memory |
| MTTS— Magnetic tape terminal station | RI— Routing indicator |
| N | RIXT— Remote Information Exchange Terminals |
| NAVCOMPARS— Naval Communications Processing and Routing System | R/T— Radiotelephone S |
| NAVMACS— Naval Modular Automated Communications System | SID— Subscriber identification |
| NCS— Net Control Station | SOPA— Senior officer present afloat |
| NECOS— Net Control Station | SSIXS— Submarine Satellite Information Exchange Subsystem |
| NST— Navy Standard Teleprinter | SSN— Station serial number |
| NSTA— Navy Standard Teleprinter Ashore | STU-III— Secure Telephone Unit Third Generation |
| NTC— Naval Telecommunications Center | SUSDUPE— Suspected duplicate |
| 0 | T |
| OAS— Office automation system | TCC— Telecommunications Center |
| OPDEC — Operational deception | Tec— refeconfindingations Center |
| OPSEC — Operational security | V |
| OTAR— Over-the-air Rekey | (V)— Version (e.g., (V)5fifth version) |
| OTAT— Over-the-air Transfer | VDT— Video display terminal |
| P | \mathbf{W} |
| PCMT— Personal Computer Message Terminal PLA— Plain language address | WWMCCS— Worldwide Military Command and Control System |

APPENDIX III

REFERENCES USED TO DEVELOP THE TRAMAN

- Automatic Digital Network (AUTODIN) Operating Procedures, JANAP 128(J), Joint Chiefs of Staff, Washington, D.C., July 1993.
- Basic Operational Communications Doctrine (U), NWP4(B) (NWP 6-01), Chief of Naval Operations, Washington, D.C., September 1989.
- Call Sign Book for Ships, ACP 113(AC), Joint Chiefs of Staff, Washington, D.C., April 1986.
- Communication Instructions—General (U), ACP 121(F), Joint Chiefs of Staff, Washington, D.C., April 1983.
- Communications Instructions—Security (U), ACP 122, Joint Chiefs of Staff, Washington, D.C., 1981.
- Communications Instructions—Tape Relay Procedures, ACP 127(G), Joint Chiefs of Staff, Washington, D.C., November 1988.
- Communications Instructions—Tape Relay Procedures, ACP 127 US SUPP-1(H), Joint Chiefs of Staff, Washington, D.C., May 1984.
- Communications Instructions—Teletypewriter (Teleprinter) Procedures, ACP 126(C), Joint Chiefs of Staff, Washington, D.C., May 1989.
- Communications Security Material System (CMS) Policy and Procedures Manual, CMS 1, Department of the Navy, Washington, D.C., March 1993.
- Department of the Navy Information and Personnel Security Program Regulation, OPNAVINST 5510.1H, Chief of Naval Operations, Washington, D.C., May 1991
- Fleet Communications (U), NTP 4(C), Commander, Naval Telecommunications Command, Washington, D.C., June 1988.
- Joint Voice Call Sign Book, JANAP 119, Joint Chiefs of Staff, Washington, D.C., January 1984.
- Radiotelephone Procedure, ACP 125(E), Joint Chiefs of Staff, Washington, D.C., August 1987.
- Secure Telephone Unit Third Generation (STU-III) Comsec Material Management Manual (CMS6), Communications Security Material System, Washington, D.C., October 1990.

- Telecommunications Users Manual, NTP 3(I), Commander, Naval Telecommunications Command, Washington, D.C., January 1990.
- Voice Communications, NTP 5(B), Naval Telecommunications Command, Washington, D.C., August 1984.

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RADIOMAN TRAINING SERIES

MODULE 5 - COMMUNICATIONS CENTER OPERATIONS

NAVEDTRA 12849

Prepared by the Naval Education and Training Professional Development and Technology Center (NETPDTC), Pensacola, Florida

Congratulations! By enrolling in this course, you have demonstrated a desire to improve yourself and the Navy. Remember, however, this self-study course is only one part of the total Navy training program. Practical experience, schools, selected reading, and your desire to succeed are also necessary to successfully round out a fully meaningful training program. You have taken an important step in self-improvement. Keep up the good work.

HOW TO COMPLETE THIS COURSE SUCCESSFULLY

ERRATA: If an errata comes with this course, make all indicated changes or corrections before you start any assignment. Do not change or correct the associated text or assignments in any other way.

TEXTBOOK ASSIGNMENTS: The text pages that you are to study are listed at the beginning of each assignment. Study these pages carefully before attempting to answer the questions in the course. Pav close attention to tables illustrations because they contain information that will help you understand the text. Read the learning objectives provided at the beginning of each chapter or topic in the text and/or preceding each set of questions in the course. Learning objectives state what you should be able to do after studying the material. Answering the questions correctly helps you accomplish the objectives.

SELECTING YOUR ANSWERS: After studying the associated text, you should be ready to answer the questions in the assignment. Read each question carefully, then select the BEST answer. Be sure to select your answer from the subject matter in the text. You may refer freely to the text and seek advice and

information from others on problems that may arise in the course. However, the answers must be the result of your own work and decisions. You are prohibited from referring to or copying the answers of others and from giving answers to anyone else taking the same course. Failure to follow these rules can result in suspension from the course and disciplinary action.

ANSWER SHEETS: You must use answer sheets designed for this course (NETPMSA Form 1430/5, Stock Ordering Number 0502-LP-216-0100). Use the answer sheets provided by Educational Services Officer (ESO), or you may reproduce the one in the back of this course booklet.

SUBMITTING COMPLETED ANSWER SHEETS:
As a minimum, you should complete at lease one assignment per month. Failure to meet this requirement could result in disenrollment from the course. As you complete each assignment, submit the completed answer sheet to your ESO for grading. You may submit more than one answer sheet at a time.

<u>Grading:</u> Your ESO will grade each answer sheet and notify you of any incorrect answers. The passing score for each assignment is 3.2. If you receive less than 3.2 on any assignment, your ESO will list the questions you answered incorrectly

and give you an answer sheet marked "RESUBMIT." You must redo the assignment and complete the RESUBMIT answer sheet. The maximum score you can receive for a resubmitted assignment is 3.2.

COURSE COMPLETION: After you have submitted all the answer sheets and have earned at least 3.2 on each assignment, your command should give you credit for this course by making the appropriate entry in your service record.

NAVAL RESERVE RETIREMENT CREDIT: If you are a member of the Naval Reserve, you will receive retirement points if you are authorized to receive them under current directives governing retirement of Naval Reserve personnel. For Naval Reserve retirement, this course is evaluated at 3 points. (Refer to BUPERSINST 1001.39 for more information about retirement points.)

STUDENT QUESTIONS: If you have questions concerning the administration of this course, consult your ESO. If you have questions on course content, you may contact NETPDTC at:

DSN: 922-1501

Commercial: (904) 452-1501

FAX: 922-1819 INTERNET:

n311.products@smtp.cnet.navy.mil

COURSE OBJECTIVES: In completing this nonresident training course, you will demonstrate a knowledge of the subject matter by correctly answering questions on the following subjects:

Center Operations. Voice Communications, Emission Control, and Cryptosecurity. Naval courses may include several types of questions--multiple-choice, true-false, matching, etc. The questions are not grouped by type but by subject matter. They are presented in the same general sequence as the textbook material upon which they are based. This presentation is designed to preserve continuity of thought, permitting step-by-step development of ideas. Not all courses use all of the types of questions available. You can readily identify the type of each question, and the action required, by reviewing of the samples given below.

MULTIPLE-CHOICE OUESTIONS

Each question contains several alternative answers, one of which is the best answer to the question. Select the best alternative, and blacken the appropriate box on the answer sheet.

SAMPLE

- s-l. The first U.S. Navy nuclear-powered vessel was what type of ship?
 - 1. Carrier
 - 2. Submarine
 - 3. Destroyer
 - 4. Cruiser

Indicate in this way on your answer sheet:

| | 1 | 2 F | 3 | 4 |
|-----|---|--------|---|---|
| s-1 | | F ■ | | □ |

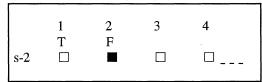
TRUE-FALSE OUESTIONS

Mark each statement true or false as indicated below. If any part of the statement is false, the entire statement is false. Make your decision, and blacken the appropriate box on the answer sheet.

SAMPLE

- s-2. Shock will never be serious enough to cause death.
 - 1. True
 - 2. False

Indicate in this way on your answer sheet:



MATCHING QUESTIONS

Each set of questions consists of two columns, each listing words, phrases or sentences. Your task is to select the item in column B which is the best match for the item in column A. Items in column B may be used once, more than once, or not at all. Specific instructions are given with each set of questions. Select the numbers identyfing the answers and blacken the appropriate boxes on your answer sheet.

SAMPLE

In answering questions s-3 through s-6, SELECT from column B the department where the shipboard officer in column A functions. Responses may be used once, more than once, or not at all.

A. OFFICER

B. DEPARTMENT

Indicate in this way on your answer sheet:

- s-3. Damage Control Assistant
- s-4. CIC Officer
- s-5. Disbursing Officer
- s-6. Communications Officer
- Operations Department
 Engineering Department
- 3. Supply Department
- 4. Navigation Department

| , | 1 T | 2 F | 3 | 4 |
|--------------------------|--------|--------|---|---|
| s-3 s-4 s-5 s-6 | | | | |

ASSIGNMENT 1

"Center Operations," chapter 1, pages 1-1 through Textbook Assignment: 1-23.

- 1-1. The PCMT system is the 1-5. When trying to recall a central part of what larger message from the hard disk Navy communications system? on the PCMT system, you can recall it by its MAN, CIN, 1. NSTA or what other factor? 2. MARCEMP 3. IMARSAT DТG 1. 4. DSN 2. TOR 3. CSN 1-2. What does the PCMT software 4. TOT package combine for message-processing? 1-6. The PCMT outputs its message traffic for the user to what 1. BIUs and IBM-compatible device? PC desktop microcomputers 1. Hard drive PC-compatible desktop 2. Diskette 2. microcomputers 3. CD - ROM 3. Desktop microcomputers 4. CD and mainframe computers Mainframe computers and 1-7. Which of the following HAVC super computers systems replaced NAVCOMPARS? 1-3. What type of 1. NSTA message-processing system is 2. DSN the PCMT system? 3. INMARSAT MARCEMP 1. Basic 2. dBase 1-8. What is the maximum number 3. Store-and-forward of send and receive channels Network that can be handled simultaneously using 1 - 4. What is the minimum amount MARCEMP? of RAM for the PCMT

microprocessor to have?

1. 1GB 2GB

3. 760K 4. 640K

2.

12 send/24 receive

24 send/12 send

3. 12 send/12 receive 4. 24 send/24 receive

1.

2.

- 1-9. Approximately what maximum 1-13.

 number of narrative or

 operator-to-operator

 messages are processed daily

 on MARCEMP?
 - 1. 1,500
 - 2,800
 - 3. 3,500
 - 4. 4,000
- 1-10. What does the GateGuard subsystem provide for the user?
 - 1. A path to AUTODIN
 - 2. A secure access to the Internet
 - 3. A means to send message traffic to the communications center
 - 4. A user friendly terminal in which to communicate with the computer
- 1-11. What are the three elements of the GateGuard System?
 - 1. AIT, OAS, and TCC
 - 2. AGT, GD, and AIT
 - 3. AGT, AIS, and GD
 - 4. TCC, OAS, and GD
- 1-12. Besides serving as a gateway to AUTODIN, GateGuard has which of the following functions?
 - 1. Speeds processing time
 - 2. Removes interference from the communications center
 - 3. Allows use of all networks
 - 4. Serves as security guard device

- 1-13. What is the path using GateGuard from the AST to the GD?
 - 1. AST, AGT, then to GD
 - 2. AGT, ASR, then to the firewall
 - 3. AST to GD
 - 4. AGT, AST, then to GD
- 1-14. What does the AST provide to the AGT?
 - 1. Long-term storage
 - Long-term archive storage
 - 3. Temporary storage
 - 4. Store and forward
- 1-15. Who manages the AUTODIN system?
 - 1. NSA
 - 2. CNCTC
 - 3. DCA
 - 4. DCS
- 1-16. What is the "backbone" of the AUTODIN system?
 - 1. TCC
 - 2. RCS
 - 3. DCA
 - 4. ASC
- 1-17. What is the total number of AUTODIN operational modes?
 - 1. 7
 - 2. 6
 - 3. 5
 - 4. 4
- 1-18. Which mode is used with unidirectional operation only?
 - 1. I
 - 2. II
 - 3. III
 - 4. IV

- 1-19. What are two types of I/O coded languages?
 - 1. ASCII and Hollerith
 - 2. ASCII and ITA #2
 - 3. ITA #2 and Hollerith
 - 4. Five level tape and card punch
- Routing indicators have what 1-20. minimum number of letters?
 - 1. Seven
 - 2. Six
 - 3. Five
 - 4. Four
- 1-21. In a routing indicator what does the third letter identify?

 - 2. Geographical area
 - 3. Designate relay
 - 4. Tributary station
- 1-22. During transmission of a message, what is the symbol ZCZC used for?
 - Signifies the start of the message
 - Starts the routing indicator series

 - The station designator 1-27.
 Geographical area for the final processing station
- What precedence of message 1-23.traffic will (a) preempt all other traffic, and (b) what is its position in the message header?
 - 1. (b) 1 (a) Yankee
 - 2. (a) Yankee (b) 3
 - 3. (a) Immediate (b) 1
 - 4. (a) ECP (b) 2

- 1-24. In the classification position of a message, the letter "A" represents what classification or special handling instruction?
 - 1. Top Secret
 - 2. Secret
 - 3. SPECAT
 - 4. Confidential
 - 1-25. In positions 5 through 8, a CAI of ZYVW tells the operator that this is what type of message?
 - 1. EAM
 - 2. Service
 - 3. Information
 - 4. Pass-through
- 1. International alliance 1-26. At a tributary station the TOF and TAD are used for what reason?
 - 1. Determine message-processing times
 - 2. Calculate delivery times only
 - 3. Calculate delivery and source times
 - 4. Determine message receipt times
 - What types of messages of up to 100 lines can be sent without paging the text?
 - 1. NAVAIR and NOTAMs
 - 2. HYDROLANT and HYDROPAC
 - 3. Statistical and meteorological
 - meteorological
 4. Data image and tributary

- 1-28. When a message may have been transmitted before, but you are not sure, you should forward the message with what marking in the header?
 - 1. RETRANS
 - 2. SUSDUPE
 - 3. EDPE
 - 4. MTTS
- 1-29. When, if ever, will a station usually notice that a message has been missent to the command?
 - 1. Upon its arrival at the command
 - 2. At the ASC switch
 - 3. At the TCC
 - 4. Never
- 1-30. How do you as an operator identify a misrouted message?
 - 1. It has one or more incorrect PLAs
 - 2. It has no routing
 instructions
 - 3. It has no security coding
 - 4. It contains incorrect routing instructions
- 1-31. In which of the following types of tapes are you NOT permitted to have splices?
 - 1. History
 - 2. Backup
 - 3. Data pattern
 - 4. Traffic

- 1-32. If a message has mismatched security classifications in a single-address message, what action will the ASC take?
 - 1. Drop to the service clerk at the ASC
 - 2. Correct the mismatch
 - 3. Reject the message back to the originator only
 - 4. Reject the message and alert the originating terminal
- 1-33. What version is considered the most sophisticated of all the NAVMACS systems?
 - 1. V1
 - 2. V1-MPD
 - 3. V3
 - 4. (V)5/(V)5A
- 1-34. For Navy use, NAVMACS is based on which of the following factors?
 - 1. Security
 - 2. Needs of the individual ships or commands
 - 3. Fleet communications area wide requirements
 - 4. Software and hardware considerations
- 1-35. In the system designated NAVMACS (V)2-MPD, what does MPD stand for?
 - 1. Modified video displays
 - Military visual deployments
 - Multi-facet variable displays
 - 4. Multi-functional digital download

- 1-36. Which of the NAVMACS systems has up to four channels of full-period termination send-and-receive circuits?
 - 1. (V) 1
 - 2. (V) 2
 - 3. (V) 3
 - 4. (V)5/(V)5A
- 1-37. What system in the fleet communication systems utilizes SID numbers?
 - 1. NAVMACS
 - 2. CDPS
 - 3. SSIXS
 - 4. CUDIXS
- 1-38. Of the many fleet communication systems, which one provides an optional satellite path to complement existing VLF/LF/HF broadcasts?
 - 1. CUDIXS
 - 2. CDPS
 - 3. NAVMACS
 - 4. SSIXS
- 1-39. What is the net cycle range on a CUDIXS/Subscriber Net Cycle?
 - 1. 10 to 120 sec
 - 2. 20 to 120 sec
 - 3. 25 to 120 sec
 - 4. 30 to 120 sec
- 1-40. What class of ships utilizes the CDPS?
 - 1. DDG
 - 2. LHA
 - 3. FFG
 - 4 . FF

- 1-41. When a submarine uses SSIXS, what (a) position must be maintained to transmit/receive to/from the satellite and (b) in what tactical situation?
 - 1. (a) Over-the-horizon
 - (b) deep running
 - 2. (a) Line-of-sight
 - (b) mast-mounted antenna exposed
 - 3. (a) Surface-to-air
 - (b) submerged
 - 4. (a) Ship-to-shore
 - (b) long wire extended
- 1-42. What system is used between submarines and submarines and shore stations?
 - 1. CDPS
 - 2. CUDIXS
 - 3. NAVMACS
 - 4. SSIXS
- 1-43. What organization has certified the use of STU-III equipment up to Top Secret?
 - 1. COMNAVCOMTELCOM
 - 2. SPAWAR
 - 3. CIA
 - 4. NSA
- 1-44. How is secure mode in the STU-III unit activated and deactivated?
 - Turning the key to the local position to place the call and then to the remote once the called party has answered
 - 2. Activated by the user key and deactivated by its removal
 - 3. Using a CIK
 - 4. By unplugging and re-plugging the STU-III

- 1-45. To obtain information on the management of STU-III terminals, you should use what publication?
 - 1. CMS 6
 - 2. CMS 1
 - 3. CMS 5
 - 4. CMS 3B
- 1-46. Precedence and preemption used in DSN are known by which of the following terms?
 - 1. MLPP
 - 2. PREEMPT
 - 3. PREC
 - 4. OVERRIDE
- 1-47. What is the total number of call treatments on the DSN system?
 - 1 . One
 - 2. Five
 - 3. Six
 - 4. Four
- 1-48. Of the call treatments, which one is preempted only by FO?
 - 1. F
 - 2. I
 - 3. P
 - 4. R
- 1-49. Of the following systems, which is NOT secure?
 - 1. CDPS
 - 2. CUDIX
 - 3. DSN
 - 4. STU-III

- 1-50. As an operator you have received an immediate contact report which does NOT have the proper authentication. What should you do with this report?
 - 1. Try to reverify the message
 - 2. Place the message in the hold box for the supervisor
 - 3. Relay or retransmit the message
 - 4. Disregard the message
- 1-51. Which of the following methods is used to protect a system against fraudulent transmissions?
 - 1. Semaphore
 - 2. Authentication
 - 3. Nancy system
 - 4. Ship-to-shore
- 1-52. Who is responsible for preparing the command guard list?
 - 1. Each command
 - 2. The TYCOM
 - 3. Each area commander
 - 4. The FLTCINCs
- 1-53. For what minimum period is the MSL retained?
 - 1. 30 days
 - 2. 90 days
 - 3. 6 months
 - 4. 12 months
- 1-54. What are the two type of keys used with the STU-III?
 - 1. CIK and blank
 - 2. CIK and seed
 - 3. Seed and ignition
 - 4. Seed and master

- 1-55. How many different manufacturers of the STU-III are there?
 - 1. One
 - 2. Two
 - 3. Three
 - 4. Four
- 1-56. When using the STU-III terminal, what modes of operation are open to your use?
 - 1. Fax and burst transmission
 - 2. Clear voice and clear data
 - 3. Secure voice and secure data
 - 4. Both 2 and 3 above
- 1-57. Where in the CIK is the information contained to seed the STU-III terminal?
 - 1. In the microchips
 - 2. In the expandable memory
 - 3. In the ignition points
 - 4. In the metal strip
- 1-58. In what publication will you find R/T procedures for reporting enemy contacts?
 - 1. ACP 125
 - 2. ACP 135
 - 3. NTP 3
 - 4. NTP 4
- 1-59. In what publication will you find enemy contact report instructions and procedures?
 - 1. ACP 124
 - 2. ACP 125
 - 3. ATP 3, VOL I
 - 4. ATP 1, VOL I

- 1-60. What does the communications plan do for your command?
 - 1. Satisfies the communications requirements for an operation
 - 2. Outlines the changing factors from ocean area to ocean area
 - 3. Gives the exact number of personnel who will be required to operate the various systems during the event
 - 4. Outlines the whole communications picture for each system
- 1-61. What is the nomenclature of the monitoring and evaluating system used by afloat forces?
 - 1. AN/SYS-80
 - 2. URC/143/T-1
 - 3. AN/SSQ-88/A/B
 - 4. QC-SYS-84
- 1-62. At what time does RADAY start worldwide?
 - 1. 23597
 - 2. 00007
 - 3. 0001Z
 - 4. 0002Z

ASSIGNMENT 2

Textbook Assignment:

"Voice Communications," chapter 2, pages 2-1 through 2-23; "Emission Control," chapter 3, pages 3-1 through 3-3; and "Cryptosecurity," chapter 4, pages 4-1 through 4-3.

- 2-1. What is the easiest and most convenient method of relaying traffic from ship to ship ship to shore, or shore to ship?
 - 1. R/T
 - 2. SECVOX
 - 3. DSN
 - 4. SNEAKER-NET
- 2-2. Which of the following is 2-5.

 NOT a good circuit technique?
 - 1. Pause a few seconds after each normal phrase and interrupt your carrier
 - 2. Speak slowly
 - Group words in a natural manner
 - 4. Hold the handset button in the push-to-talk position until ready to transmit
- 2-3. What are prowords used for?
 - 1. To expedite message handling on circuits where radio-telephone procedures are used
 - 2. To replace "Q" and "Z"
 signals
 - 3. To replace the phonetic alphabet
 - 4. To allow area commanders to use brevity codes to expedite all coded traffic

- 2-4. What proword is used to replace "addressees immediately following are exempted from the collective call?"
 - 1. EXECUTE
 - 2. EXEMPT
 - 3. INFO
 - 4. IMMEDIATE EXECUTE
- 2-5. What proword is the equivalent of ZOF?
 - 1. SERVICE
 - 2. SPEAK SLOWER
 - 3. TIME
 - 4. RELAY
- 2-6. In what publication will you find Communication
 Instructions, Operating Signals?
 - 1. ACP 131
 - 2. JANAP 126
 - 3. ACP 135
 - 4. JANAP 128
- 2-7. What is the real-time procedure that tells an operator on a nonsecure voice circuit that he or she has made an unauthorized disclosure?
 - 1. RAINFORM
 - 2. WARNING ONE
 - BEADWINDOW
 - 4. SECURITY

- 2-8. EEFI 03 is transmitted over a nonsecure voice circuit to you as an operator. What type of information have you revealed?
 - 1. Position
 - 2. Operations
 - 3. Capabilities
 - 4. COMSEC
- 2-9. After being "BEADWINDOWED," what is your only response?
 - 1. RETRANSMITTING AGAIN IN SECURE FORMAT
 - 2. ROGER, STANDING BY
 - 3. RETRANSMITTING FOR CLARITY FOR USER
 - 4. ROGER, OUT
- 2-10. Where is the EEFI list posted?
 - 1. Inside VOXCOM area
 - 2. In clear sight at all nonsecure voice positions
 - 3. On the back of the nonsecure phone
 - 4. In the standing orders of the day
- 2-11. On a large ship where will you find most of the voice circuits that a commanding officer needs?
 - 1 . CIC
 - 2. Radio
 - 3. Radio two
 - 4. Captain's cabin

- 2-12. What publication lists the publications that contain encrypted and daily changing call signs?
 - 1. ACP 110
 - 2. ACP 113
 - 3. NTP 5
 - 4. NTP 4
- 2-13. Circuits that are used in port and are neither tactical nor operational are categorized as what type?
 - 1. TACTCKT
 - 2. Port operations
 - 3. Tug control
 - 4. Administrative
- 2-14. Who establishes the circuit requirements from port to port?
 - 1. SOPA
 - 2. Port Captain
 - 3. Tug Control
 - 4. Senior Pilot
- 2-15. What are the types of nets?
 - 1. Free and control
 - 2. Control and directed
 - 3. Directed and free
 - 4. Control, directed, and NECOS
- 2-16. What is NECOS's function?
 - Responsible for operational procedures, discipline, and security
 - 2. Shares a common circuit for security advisement
 - 3. Collectively monitors all circuits for security
 - 4. Directs the net in a civilian uprising or natural disaster

- 2-17. What is the difference between (a) a free net and (b) a directed net?
 - (a) You can use the net without permission(b) you must get permission from NECOS
 - 2. (a) You can use either secure or nonsecure circuits
 - (b) you must use only
 the secure net
 - 3. (a) You can only use nonsecure circuits
 (b) you are free to use either secure or nonsecure circuits
 - 4. (a) You can only call up those ships or commands on an administrative net (b) the NECOS will tell you whom you may call up
- 2-18. Who is responsible for opening or reopening a net?
 - 1. CIC
 - 2. NECOS
 - 3. Communications Area Master Station
 - 4. The last ship using the net
- 2-19. When a ship needs to pass traffic to another ship, how long in duration should the test signal be to tune the receiver or transmitter?
 - 1. 10 sec
 - 2. 20 sec
 - 3. 25 sec
 - 4. 30 sec

- 2-20. What is the correct method of receipting for a R/T message?
 - Pass in the blind the numbers being receipting for
 - 2. Send a formatted class A type of message
 - 3. Use the proword ROGER
 - 4. Get on the secure voice and pass back the receipted message
- 2-21. You are the only ship when you receive a delayed executive method message. What is the correct method to respond?
 - 1. THIS IS (STATION), ROGER, OUT
 - 2. THIS IS (STATION). OUT
 - 3. (STATION), ROGER, OUT
 - 4. (STATION), OUT
- 2-22. You have received an "EXECUTE TO FOLLOW" command and several minutes have elapsed. What will be the correct EXECUTE command to initiate action?
 - 1. EXECUTE
 - 2. Standby, EXECUTE
 - 3. EXECUTE, EXECUTE
 - 4. EXECUTE TO FOLLOW, EXECUTE
- 2-23. In what publication will you find a complete list of the required information to be found on a R/T log?
 - 1. NWP 0 (NWP 1-01)
 - 2. NTP 5
 - 3. NTP 3
 - 4. NTP 4

- 2-24. When, if ever, can you legally erase an entry in a log?
 - 1. If an entry contains a misspelling
 - 2. If an entry was not placed at the correct time and the operator must completely rewrite the log with the correct entry placed at the correct time
 - 3. If an entry contains incorrect information
 - 4. Never
- 2-25. What are the two actions an operator must take to correct a log entry?
 - 1. Use the X key to typeover the incorrect information and use white out to correct the erroneous entry
 - 2. Use the slant key to type the information to be deleted and initial the entry
 - 3. Erase the entry and retype it in full
 - 4. Retype the entry underneath and then strike out the erroneous material with the slash key
- 2-26. What does EMCON mean?
 - 1. Emergency condition
 - 2. Emission control
 - 3. Enemy control
 - 4. Emission condition

2-27. What is EMCON?

- 1. The system to facilitate how emergency conditions are handled
- 2. An area that is
 off-limits for
 broadcasting into enemy
 controlled spaces
- 3. An emission condition that limits power outputs
- 4. The management of electromagnetic and acoustic emissions
- 2-28. Who usually imposes EMCON?
 - 1. EWC
 - 2. CIC officer
 - 3. Radio officer
 - 4. Commanding officer
- 2-29. As an operator, why do you not want to transmit any type of communications during EMCON?
 - 1. You can burn up a transformer
 - 2. Radiation patterns will allow your position to be distorted
 - 3. You can be detected, and your position will be known
 - 4. High levels of RF energy will be present in the radio shack

- 2-30. In what publications will 2-34. you find the necessary detailed requirements, procedures, and guidelines to help you with the implementation of EMCON?
 - 1. NTP 3 and NWP 3 (NWP 1-02)
 - 2. NTP 3 and NTP 4
 - 3. NWP 10-1-40 (NWP 3-51.1) and NWP 4 (NWP 6-01)
 - 4. NTP 4 and NWP 10-1-40 (NWP 3-51.1)
- Which of the following steps 2-31. should be taken on each ship concerning EMCON?
 - 1. Provide a check-off of emitter status
 - 2. Designate individuals responsible for each emitter
 - 3. Establish an EMCON control center with overall responsibility
 - 4. All of the above
- Who is responsible for 2-36. 2-32. planning and establishing a shipboard emitter status?
 - 1. The TYCOM
 - 2. Each ship
 - 3. The FLTCINCs
 - 4. The EWCs
- Which of the following is 2-33. NOT an objective of EMCON?
 - 1. Reduce the power output of the emitters aboard ship
 - 2. Support OPSEC

- When, if ever, should a ship notify the shore station of impending EMCON requirements for radiation restrictions?
 - 1. Only if required in writing by the TYCOM
 - 2. Before the restrictive period
 - 3. Only during "Spook Ops", and only if required by the mission statement
 - 4. Never; this could lead to the enemy intercepting the message
- 2-35. When returning to the air after EMCON, a ship with a VFCT termination is required to establish what circuit first?
 - 1. The multichannel broadcast
 - 2. SAR monitoring
 - 3. DAMA
 - 4. The orderwire
- What is the frequency range that is prohibited for use during HERO conditions?
 - 10-15 MHz 1.
 - 20-25 MHz
 - 3. Below 30 MHz
 - 4. Above 35 MHz
- 2-37. Why is RF radiation considered a threat?
 - 1. RF burns
 - 2. Premature firing of ordnance or explosion
- 3. High radiation pattern 3. Degrade the enemy's C2 emissions
 4. Allow effective friendly 4. An overcrowded frequency
 - band

- 2-38. What is the main cause of EEDs exploding during HERO?
 - 1. Heat
 - 2. Cold
 - 3. Reversal in polarity
 - 4. Dropping
- 2-39. What is the purpose of transmitters and their antennas?
 - 1. To relay voice intelligence transmissions
 - 2. To direct high patterns
 - 3. To utilize low patterns
 - 4. To radiate electromagnetic energy
- 2-40. When are ordnance most susceptible to RF energy fields?
 - 1. One hour prior to firing
 - 2. When they are being armed
 - During loading, unloading and handling
 - 4. During dry firing
- 2-41. What are the alternate methods to communicate during HERO or EMCON conditions and limitations?
 - Non-electrical and subsonic
 - 2. Electrical and non-electrical
 - 3. Electrical and ferrous
 - 4. Non-electrical and distributed

- 2-42. What is the total number of alternate electrical communications methods developed for use during EMCON and HERO conditions?
 - 1. One
 - 2. Two
 - 3. Three
 - 4. Four
- 2-43. During AUTOCAT, what provides the means for relaying the transmissions?
 - 1. A ship
 - 2. An airplane, and the Nancy system
 - 3. A ship, an operator, and an LF transmitter
 - 4. A ship, a COD flight, and two copies of each message
- 2-44. What is the main difference in the three types of alternate electrical methods of communications?
 - 1. Physical means of transportation
 - 2. Circuit configurations
 - 3. Electrical means of radiation
 - 4. Equipment restraints
- 2-45. What are the two types of non-electrical relay systems now in use?
 - 1. MIDDLEMAN and BEAN BAG
 - 2. AUTOCAT and SATCAT
 - 3. SATCAT AND PIGEON POST
 - 4. PIGEON POST and BEAN BAG

- 2-46. What non-electrical relay 2-51. Which of the following method uses aircraft?
 - 1. CARRIER PIGEON
 - 2. COD FLIGHT
 - 3. PIGEON POST
 - 4. SMALL BOY
- 2-47. What non-electrical relay method utilizes helicopters? 2-52.
 - 1. BEAN BAG
 - 2. TIGHT DOOR
 - 3. OPEN HATCH
 - 4. LOST RANGER
- 2-48. What is the type of material that is used to protect U.S. Government transmissions, communications, and processing of sensitive unclassified information?
 - TOP SECRET 1.
 - 2. SECRET
 - COMSEC 3.
 - 4. Classified
- In what publication will you 2-54. 2-49. find detailed information on COMSEC material handling?
 - 1. CMS 1
 - 2. CMS 5
 - 3. CMS 3
 - CMS 6
- What instruction covers the 2-50. handling of classified material?
 - 1. OPNAVINST C5510
 - 2. SECNAVINST 2515
 - 3. SECNAVINST 5238.1
 - 4. OPNAVINST 5510.1

- methods is NOT an authorized technique of destruction?
 - 1. Pulverizing
 - 2. Chipping
 - 3. Shredding
 - 4. Pulping
- If only a single person destroys Secret material what records, if any, are required?
 - 1. Disclosure
 - 2. Destruction
 - 3. Eradication
 - 4. None
- 2-53. What type of record, if any, is required when destroying Confidential material?
 - 1. Eradication
 - 2. Destruction
 - 3. Disclosure
 - 4. None
 - Who ensures that the material that is being destroyed has been completely destroyed and only residue is left?
 - 1. The senior person present
 - 2. The CMS custodian
 - 3. The communications officer
 - 4. The executive officer
- 2-55. What is the required paygrade level for receipt of SPECAT, Top Secret or above material?
 - 1. E-1 through E-9
 - 2. E-5 and above
 - 3. E-6 and above
 - 4. E-7 and above

- 2-56. How do you account for who 2-60. Each communication watch has physical control of SPECAT, Top Secret, or above material?

 - By signature
 By identification card
 - 3. Letter of appointment
 - 4. All of the above
- 2-57. What type of form is required for you to handle and use COMSEC material?
 - 1. Local User form
 - 2. CMS Responsibility Acknowledgement form 2-61.
 - 3. Local Holder form
 - 4. COMSEC Material Issue form
- Where will you find the 2-58. original form that allows you to handle and use COMSEC material?
 - 1. CMS 5, Annex I
 - 2. CMS 3B, Annex A
 - 3. NAG 16, Annex FF
 - 4. CMS 1, Annex K
- 2-59. Where is the form kept that allows you as a user to handle and receipt for COMSEC material?
 - 1. With DCMS
 - 2. With the Local User custodian
 - 3. With the Local Holder custodian
 - 4. With the CMS custodian

- station, section, or crew has an inventory of all the COMSEC material that the watch holds. The material is listed by accounting numbers, edition, short title, and what other item?
 - 1. Number of unopened key cards
 - 2. Prior destroyed editions
 - 3. Quantity
 - 4. Number of superseded canisters
- In what publication and article will you find how COMSEC material must be marked for effective and superseded dates?
 - 1. CMS 1, Art. 760
 - 2. CMS 1, Art. 100
 - 3. CMS 5, Art. 122
 - 4. CMS 6, Art. 002
- 2-62. Which of the following chapters of CMS 1 details the personnel, methods, and time periods for destroying COMSEC material?
 - 1. One
 - 2. Five
 - 3. Seven
 - 4. Eight

- 2-63. When you as the LH custodian are required to return unused material to the CMS custodian, you should use what form?
 - 1. SF-100
 - 2. SF-210
 - 3. SF-153
 - 4. Unutilized Material Delivery

STUDENT COMMENT SHEET

THIS FORM MAY BE USED TO SUGGEST IMPROVEMENTS, REPORT COURSE ERRORS, OR TO REQUEST HELP IF YOU HAVE DIFFICULTY COMPLETING THE COURSE.

NOTE: IF YOU HAVE NO COMMENTS, YOU DO NOT HAVE TO SUBMIT THIS FORM.

| FROM: | Date | |
|--|-----------------|--|
| RATE/RANK/GRADE, NAME (FIRST, M.I., LAST) | DSN:Commercial: | |
| STREET ADDRESS, APT # | FAX:INTERNET: | |
| CITY, STATE, ZIP CODE | | |
| To: COMMANDING OFFICER NETPDTC CODE N311 6490 SAUFLEY FIELD RD PENSACOLA FL 32509-5237 | | |

Subj: RADIOMAN TRAINING SERIES, MODULE 5 - COMMUNICATIONS CENTER

1. The following comments are hereby submitted:

OPERATIONS, NAVEDTRA 12849

PRIVACY ACT STATEMENT

Under authority of Title 5, USC 301, information regarding your military status is requested to assist in processing your comments and in preparing a reply. This information will not be divulged without written authorization to anyone other than those within DOD for official use in determining performance.

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DEPARTMENT OF THE NAVY

COMMANDING OFFICER NETPDTC CODE N311 6490 SAUFLEY FIELD RD PENSACOLA FL 32509-5237

OFFICIAL BUSINESS

COMMANDING OFFICER NETPDTC CODE N311 6490 SAUFLEY FIELD RD PENSACOLA FL 32509-5237

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